

Product Information

Background

For moisture or light sensitive products, high-barrier materials such as aluminum foil is used because even thin material still provides full barrier capabilities for the product inside.

However, the mechanical stress on the material during cold forming can cause almost imperceptible cracks and pinholes which then defeat the purpose of a high-barrier package.

VisioScan closes the final gap in quality testing for these tiny and literally invisible material defects. The system scans the complete material surface and detects damages in material down to 10 μm . The system is best known for blister forming as well as blister lidding material inspection applications in the pharmaceutical packaging arena.



Close-up of typical alu-alu blister cards which are providing a high-barrier protection for the packaged product

Besides 100% surface inspection of above shown aluminum blisters, also the material side-walls are effectively inspected. Pinholes, pores, fissures, foil fractures and cracks will be detected according to the set threshold.

The inspection area can be divided into different zones. Therefore, a targeted reject can be achieved and neighboring areas can continue further in the downstream process.

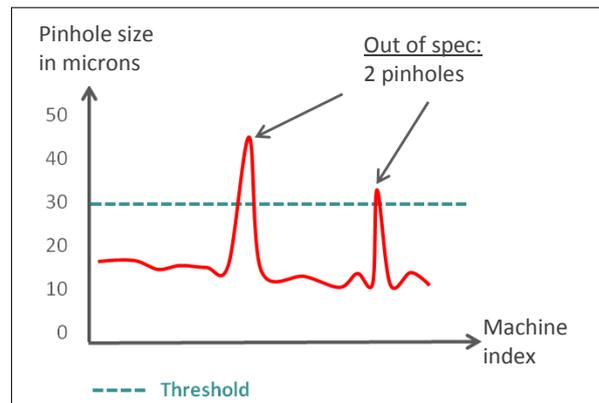
VisioScan can be used in other application areas for any kind of non-transparent materials, such as e.g. tubular objects.



Pinhole inspection system VisioScan for aluminum forming material installed on an Uhlmann blister machine

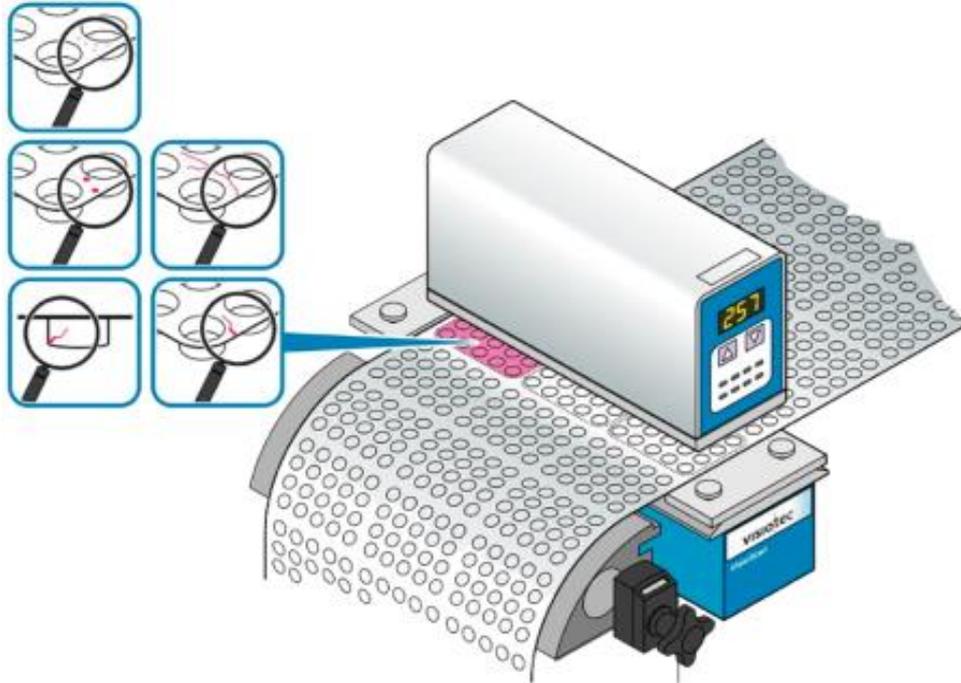
Other application areas:

- Pinhole inspection for aluminum forming and lidding materials during tray packaging processes
- Pinhole inspection of pouch materials
- Pinhole inspection of tubular material (e.g. pipes)
- Pinhole inspection of welding/seam areas
- New applications can be evaluated during a proof of concept (POC) study



Example: VisioScan visualization

Functional Principle



Highlights

VisioScan works on the basis of IR radiation. The system emits IR light which in case of pinholes shines through the object of interest.

The receiver part of the system then provides the corresponding result: if the amounts of photons which are passing through an object are exceeding the calibrated threshold, a pinhole is present. The certified pinhole masks allow the user to set the system sensitivity to a desired size.

The robust and highly sophisticated light emitter and receiver can be custom designed in size to fit numerous applications and comes standard with a 3 year warranty. Currently, there are over 1,000 systems running around the globe in various application areas.

- 100% surface inspection of e.g. foil material incl. side-wall detection capabilities to ensure the proper barrier function or tightness of the object of interest
- Inspection down to 10 μm sized holes (depending on application)
- Calibration kit with μm -sized and certified pinhole masks to set the system's threshold
- Multiple zones can be set to avoid rejection of good product
- Compact and space saving design
- GMP compliant